

01-04-00

A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Herbert Gropp et al.
 Serial No: Art Unit: 3748
 Filing Date:
 Title: BUILT-UP CAMSHAFT
 Examiner
 Prior Application Examiner: Weilun Lo
 Attorney's Docket Number: RUM212

jc586 U.S. PTO
 09/476521
 01/03/00

January 3, 2000

Rum212T1

TRANSMITTAL LETTER

Hon. Commissioner of Patents and Trademarks
 Washington, D.C. 20231

SIR:

Transmitted herewith for filing is:

- <X> Request for Filing a Continuation Application under 37 CFR 1.60.
 - <X> Photocopy of the Patent Application, serial number 09/016,597, as filed on January 30, 1998 (8 pages, 1 page of Abstract and 1 sheet of drawings)
 - <X> Photocopy of the Inventor Declaration as filed in prior Patent Application, Serial No. 09/016,597, on March 30, 1998
 - (X) Enclosed is a check to cover the fee in the amount of \$345.00.
 - (X) The applicant hereby petitions the Commissioner of Patents and Trademarks to extend the time for response to any Office Action outstanding in the above captioned matter as necessary to avoid abandonment of the application. Please charge my deposit account No.11-0224 in the amount required to cover the cost of the extension. Any deficiency or overpayment should be charged or credited to the above account.
 - (X) The Commissioner is hereby authorized to charge any fees under 35 U.S.C. 1.16, and 1.17, after a mailing of a Notice of Allowance under 35 USC 1.18 or any additional fees which may be required during the entire pendency of the application, or credit any overpayment, to Acct. No.11-0224. A duplicate copy of this sheet is enclosed. If and only if account funds should be insufficient, immediately contact our associate, Lisa Zumwalt, at (703)415-0579, who will pay immediately to avoid deprivation of rights.
 - () Please charge my Deposit Account No.11-0224 in the amount of \$_____. A duplicate copy of this sheet is enclosed.
- A signature or signatures required for the above recited document(s) is (are) provided herebelow. Such signature(s) also provide(s) ratification for any required signature appearing to be defective in the above recited document(s).

Horst M. Kasper
 Horst M. Kasper, 13 Forest Drive, Warren, N.J. 07059
 Reg. No. 28,559 Tel. (908) 757-2839

Express Mail Certification:

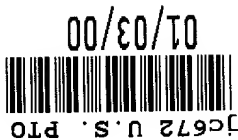
I hereby certify that this correspondence is being deposited with Express Mail Post Office to Addressee in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231,

on.....**JAN 0 3 2000**....."Express Mail Mailing Label No": **TB 173 616 476 US**.....

Signature.....**STAN-LAS**..... Date.....**JAN 0 3 2000**.....
 *%pt0:trans0(Rum212T1(January 3, 2000(tm

jc672 U.S. PTO
 01/03/00

09476521 010300



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Herbert Gropp et al.
Serial No:
Filing Date:
Title: BUILT-UP CAMSHAFT
Examiner:
Prior Application Examiner: Weilun Lo
Attorney's Docket Number: RUM212
Art Unit: 3748

January 3, 2000

RUM212R1

REQUEST FOR FILING A CONTINUATION APPLICATION
UNDER 37 CFR 1.60

Assistant Commissioner for Patents
Washington, D.C. 20231

SIR:

This is a request for filing a

<X> continuation application under 37 CFR 1.60
< > divisional application under 37 CFR 1.60

of pending prior Application Number 09/016,597, filed on January 30, 1998, entitled BUILT-UP CAMSHAFT.

1. Enclosed is a copy of the latest inventor - signed prior application, including a copy of the oath or declaration showing the original signature or an indication it was signed. I hereby verify that the papers are a true copy of the latest signed prior application number 09/016,597, and further that all statements made herein of my own knowledge are true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

TOTAL CLAIMS	5	-	20	=	X	=	\$
INDEPENDENT CLAIMS	1	-	3	=	X	=	\$
MULTIPLE DEPENDENT CLAIMS						=	\$
BASIC FEE						=	\$ 690.00
TOTAL OF ABOVE CALCULATIONS =						\$	690.00
REDUCTION BY 50% FOR FILING BY SMALL ENTITY =						\$	345.00
TOTAL:						=	\$ 345.00

2. ☒ A verified statement to establish small entity status under 37 CFR 1.9 and 1.27
 ☐ is enclosed
 ☒ was filed in prior application No. 09/016,597 and such status is still proper and desired (37 CFR 1.28(a)).
3. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required under 37 CFR 1.16 and 1.17, or credit any overpayment to Deposit Account No.11-0224. A duplicate copy of this sheet is enclosed.
4. ☒ A check in the amount of \$345.00 is enclosed.
5. ☐ Cancel in this application original claims of the prior application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
6. ☒ The inventor(s) of the invention being claimed in this application is (are): **Herbert Gropp, Dietmar Klose, Claus-Peter Durlich, Manfred Janssen**
7. ☐ The application is being filed by less than all the inventors named in the prior application. In accordance with 37 CFR 1.60(b), the Commissioner is requested to delete the name(s) of the following person or persons who are not inventors of the invention being claimed in this application:
8. ☒ Amend the specification by inserting before the first line the sentence:
 "This application is a ☒ continuation ☐ division of application number 09/016,597, filed on January 30, 1998, now pending."
9. ☐ New formal drawings are enclosed.
10. ☒ Priority of a foreign application serial number 197 03 260.3, filed on January 30, 1997 in the Germany is claimed under 35 U.S.C. 119(a) - (d).
 ☒ acknowledgement was made of a claim for foreign under 35 USC § 119(a)-(d) that all of the certified copies of the priority documents have been received; acknowledgement that all of the certified copies of the priority documents have been received was included in the Office Action mailed on October 16, 1998 (paper No. 8) in prior application number 09/016,597, filed January 30, 1998.

[illegible]

Page 3 of 3

[illegible]

Horst M. Kasper, their attorney
13 Forest Drive, Warren, N.J. 07059
Telephone: (908)757-2839
Telefax: (908)668-5262
Reg.No. 28559; Docket No.: rum205SP

SPECIFICATION

Variable	Mean	SD	Min	Max
Age	34.5	10.2	21	55
Gender	0.5	0.5	0	1
Marital status	0.6	0.5	0	1
Education	12.5	1.5	9	16
Income	1500	500	500	3000
Health status	0.8	0.2	0	1
Smoking status	0.3	0.5	0	1
Alcohol consumption	0.2	0.4	0	1
Exercise frequency	0.5	0.5	0	1
Stress level	0.7	0.3	0	1
Depression score	0.4	0.4	0	1
Life satisfaction	0.6	0.3	0	1
Work satisfaction	0.5	0.4	0	1
Family satisfaction	0.6	0.3	0	1
Community satisfaction	0.5	0.4	0	1
Overall well-being	0.6	0.3	0	1

1. Field of the Invention

2. Brief Description of the Background of the Invention Including Prior Art

The shaping of the cams from the pipe by internal high-pressure deformation is also being considered.

- 2 -

[illegible]

1. Purposes of the Invention

Based on the state of the art, the present invention has the object to build a camshaft with commercially available materials and semifinished materials with a simple technology, wherein said camshaft is manufactured in mass production at an advantageous cost.

These and other objects and advantages of the present invention will become evident from the description which follows.

2. Brief Description of the Invention

The present invention provides for a camshaft according to the characterizing portion of claim 1.

Suitable embodiments of the invention are contained in the subclaims.

The attachment of the cams and of the other parts on the pipe is performed with a longitudinal compression joint. The pipe is coated, preferably with a finely crystalline phosphate coating, as known from the East German printed patent document 015 2972, such that the overdimensioned cams, which are to be slipped, do not score and seize, that the friction tightness is increased, and that no tribocorrosion is generated later on. Following a careful

camshaft segment;

Fig. 2 is a schematic sectional view through a camshaft end;

Fig. 3 is a view of the entire camshaft on a reduced scale.

DESCRIPTION OF INVENTION AND PREFERRED EMBODIMENT

The jointing coating 2 between the pipe 1 and the cams 3 of light-weight sheet metal construction is indicated in Fig. 1. However, the jointing coating 2 in fact does not have a measurable radial extension.

In Fig. 2, the pipe has an inner coating 5, such that the end piece 4 can be pressed in.

Fig. 3 shows the entire camshaft, wherein all parts to be disposed on the pipe, are longitudinally pressed onto the camshaft. For simplicity's sake, the cams are represented as disks.

Patent Claims

1. A built-up camshaft comprising
a pipe or a solid rod,
cams,
bearing rings,
end pieces, and
other parts, wherein the cams (3), the end pieces (6), the
bearing rings, and the other parts are connected by means of
longitudinal compression joints to the pipe or to the solid
rod, wherein the parts to be connected are provided with a
suitable surface coating, and wherein the surface coating
prevents a tribocorrosion and increases the load capacity as
compared to conventional compression joints.
2. The camshaft according to claim 1, wherein
the coating (2, 5) is a joint-stable conversion coating.
3. The camshaft according to claim 1, wherein
the coating (2, 5) is a metal coating or a cement coating.
4. The camshaft according to claim 1, wherein
the pipe or the solid rod and/or the cams, the end pieces,
the bearing rings, and the other parts are made out of

metal, ceramics, plastics or other materials, by cutting or non-cutting, by milling or forging in massive or profiled form.

5. The camshaft according to claim 1, wherein the outer jacket face of the pipe or of the solid rod has a drawn quality or is completely or partially mechanically machined.

[illegible][illegible]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Herbert Gropp et al.
Serial No: Art Unit:
Filing Date: January 30, 1998
Title: BUILT-UP CAMSHAFT
Examiner:

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION
Erklärung Für Patentanmeldungen Mit Vollmacht
German Language Declaration rum205

Als nachstehend benannter Erfinder erkläre ich hiermit an
Eidesstatt:

As a below named inventor, I hereby declare that:

daß mein Wohnsitz, meine Postanschrift und meine Staats-
angehörigkeit den im Nachstehenden nach meinem Namen aufgeführten
Angaben entsprechen,

My residence, post office address and citizenship are as stated
below next to my name,

daß ich, nach bestem Wissen der ursprüngliche, erste und
alleinige Erfinder (falls nachstehend nur ein Name angegeben ist)
oder ein ursprünglicher, erster und Miterfinder (falls
nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin,
für den dieser Antrag gestellt wird und für den ein Patent
beantragt wird für die Erfindung mit dem Titel:

Gebaute Nockenwelle

I believe I am the original, first and sole inventor (if only one
name is listed below) or an original, first and joint inventor
(if plural names are listed below) of the subject matter which is
claimed and for which a patent is sought on the invention
entitled:

BUILT-UP CAMSHAFT

deren Beschreibung (nur eines der nachfolgenden Kästchen
ankreuzen)

the specification of which (check only one item below)

< > hier beigefügt ist.
is attached hereto.

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 USC 120:

FRÜHERE AMERIKANISCHE ANMELDUNGEN ODER DIE USA BENENNENDE INTERNATIONALE PCT-ANMELDUNGEN FÜR VORRECHT UNTER 35 USC 120

U.S. APPLICATIONS		STATUS (Check one)
U.S. Application No.	U.S Filing Date	Patented Pending Abandoned
AMERIKANISCHE ANMELDUNGEN		STAND (ein Kästchen ankreuzen)
Seriennummer	Anmeldedatum	Patentiert Anhängig Aufgegeben
		< > < > < >

PCT APPLICATIONS DESIGNATING THE U.S.

PCT Application Number	PCT Filing Date	U.S.Ser.Nos.
		assigned (if any)

DIE USA BENENNENDE PCT-ANMELDUNGEN		
PCT-Anmelde- nummer	PCT-Anmeldedatum	Zugeteilte Serien- nummern (falls zutreffend)
		< > < > < >

VERTRETUNGSVOLLMACHT: Als benannter Erfinder beauftrage ich hiermit den nachstehend benannten Patentanwalt (oder die nachstehend benannten Patentanwälte) und/oder Patent-Agenten mit der Verfolgung der vorliegenden Patentanmeldung sowie mit der Abwicklung aller damit verbundenen Geschäfte vor dem Patent- und Warenzeichenamt: (Name und Registrationsnummer anführen)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)

Horst M. Kasper (Reg. No. 28,559)
Richard T. Laughlin (Reg. No. 17,264)
Telefongespräche bitte richten an: (Name und Telefonnummer)
Direct Telephone Calls to: (Name and telephone number)

Horst M. Kasper (908) 757-2839

Postanschrift:

Send Correspondence to:
13 Forest Drive
Warren, N.J. 07059

Ich erkläre hiermit, daß alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und daß ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, daß wissentlich und vorsätzlich falsche Angaben gemäß Paragraph 1001, Absatz 18 der Zivilprozeßordnung der Vereinigten Staaten von

Full name of fourth joint inventor, if any

Manfred Janssen

Unterschrift des vierten Erfinders
Fourth Inventor's signature

Datum
Date

.....Manfred Janssen.....

.....March 4, 1998.....

Wohnsitz
Residence
08412 Werdau
Germany

Staatsangehörigkeit
Citizenship
Germany

Postanschrift
Post Office Address
Plauensche Strasse 68
08412 Werdau
Germany

PTO 1391 (10-83)
*%pt0:germde(rum205(January 30, 1998(tm